Appendix A
Mitigation Measures Inherent in the Project Design

The proposed project includes measures that would limit construction and operation impacts to elements of the natural and human environment. These measures are presented for each element of the environment identified as a potential concern by Bonneville and EFSEC based on preliminary environmental review and public and regulatory agency input.

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
EARTH			
Seismicity			
Facilities would be designed to meet regional seismic design criteria as presented in the Uniform Building Code (UBC).	X	X	
Any slopes requiring soil reinforcement to resist seismic loading would be reinforced with geo-grid for fills and soil nailing for cuts.	X		
The plant would be designed to reasonably withstand ground acceleration levels that are unlikely to occur over the life of the project. Specifically, project facilities would be designed for magnitude 7 earthquake with a peak ground acceleration of 0.22g. This design standard primarily affects the foundation and structural steel specifications for buildings, the HRSG structure, combustion gas turbine-generator foundations, steam turbine-generator foundations and supports, cooling tower basins and structures, HRSG stacks, and large tank foundations and design.	X		
Visual inspection would be conducted following perceptible seismic activity. Inspectors would look for signs of incipient mass movements in those areas identified as potentially susceptible to such failures.	X	X	
Structures would be designed to reasonably withstand ground motions associated with the Maximum Credible Earthquake.			X
Structures would be sited to avoid unstable slopes or difficult soil conditions wherever possible.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Stormwater and Erosion			
Stormwater detention ponds would be sized to contain the 100-year rainfall event of 1.8 inches in a 24-hour period. Power plant water would be collected and diverted through oil-water separator to lined pond for reuse on-site. External stormwater would be collected and diverted to unlined pond for evaporation and percolation to groundwater.	X		
Silt fences/hay bales, diversion ditches, and hydro seeding would be sized to handle the 10-year, 24-hour storm. Seeding mixes would be selected to survive in the arid environment of the project site.	X	X	X
Clearing, excavation and grading would be limited to areas absolutely necessary for construction. Areas outside the construction limits would be identified and clearly marked and avoided.	X	X	X
To the extent possible, excavation and grading would be timed to coincide with the dry seasons to reduce the potential for water erosion. Water would be applied to control dust and minimize wind erosion.	X	X	
Excavated materials would be reused. Excess materials would be placed where they would not easily erode, and would not be placed at slopes steeper than 4 horizontal: 1 vertical unless compacted to the requirements of structural fills. Disturbed areas would be revegetated by seeding.	X	X	X
Soil stockpiles would be covered with tarps or emulsion and surrounded by silt fences and hay bales, where necessary, to prevent excessive erosion by wind or rain.	X	X	X
Surface runoff would be directed around and away from cut-and-fill slopes and conveyed in pipes or temporary channels.	X	X	
At road crossings or where water erosion potential is high, the trenches would be compacted to 95% of maximum dry density by compacting until the backfill is flush with original or finish grade.	X	X	
During ongoing operations, routine maintenance and inspection activities would include project site inspections and compliance with the stormwater pollution prevention plan, landscaping plan, and erosion control plan (until permanent erosion control features are established).	X	X	
Erosion hazard areas would be avoided wherever possible.	X		X
Disturbed sites would be reseeded with a seed mixture suited to the site at an optimal time for success.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Discharge of solid materials including building materials into waters of the United States would be avoided unless authorized by a Clean Water Act Section 404 permit. Measures would be implemented to reduce off-site tracking of soil and the generation of dust. Vegetative buffers would be left along stream courses to minimize erosion and bank instability.			X
If required, a stormwater pollution prevention plan (SWPPP) would be prepared, as required under the National Pollutant Discharge Elimination System (NPDES) General Permit.			X
Disruption of low-growing vegetation would be minimized to reduce potential for wind and water erosion.			X
An erosion and sediment control plan (ESCP) that incorporates best management practices (BMPs) would be developed and implemented for this project.			X
The Wallula Power Project would include regular surveillance of the makeup water supply pipeline to identify and repair dune shift erosion and accretion. GTN, as the owner and operator of the natural gas pipeline, would provide regular surveillance of the natural gas pipeline.		X	
Vegetative buffers would be left along stream courses to reduce erosion and bank instability.			X
Grading/Geotechnical			
To the extent feasible, slopes would be graded to no steeper than 2 horizontal: 1 vertical	X	X	X
The top 12 inches of topsoil in the areas of agricultural and native habitat would be removed and preserved for final grade reuse.	X	X	
Trench materials would be replaced and compacted to a minimum of 85% of the maximum dry density.	X	X	
Embankments, bedding for buried pipe, and backfill surrounding structures would be compacted to at least 90% of the maximum dry density. General backfill placed in remote and/or unsurfaced areas would be compacted to at least 85% of the maximum dry density.	X	X	
Based on detailed geotechnical surveys, specific foundations would be designed and constructed to reduce the potential for soil subsidence, soil liquefaction, soil frost heaving, and soil expansion.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Debris and material not suitable for backfill would be removed and disposed of at an acceptable location on the site. Graded areas would be smooth, compacted, free from irregular surface changes, and sloped to drain. Backfilling would be done in layers of uniform, specified thickness material. Soil in each layer would be properly moistened to facilitate compaction to achieve the specified density. Representative field density and moisture-content tests would be made during compaction. Structural fill supporting foundations, roads, equipment access areas, etc. would be compacted to at least 90% of the maximum dry density in accordance with ASTM D698.	X		
The placement of fill consisting of moisture-sensitive soils would be limited to dry weather periods. If storm events occur during construction periods, fill placement would be suspended until the soil can be properly moisture conditioned. A qualified engineer or engineering technician would monitor the fill and backfill placement during construction and would conduct the appropriate field tests to verify proper compaction of the fill and backfill.	X		
Foundations would be designed to accommodate undesirable soil conditions where necessary.			X
Periodic inspection and maintenance of all structures would be performed to identify and correct progressive adverse geologic processes before they pose a risk of failure or significant environmental impact.			X
Roads and Culverts			
Based on soil conditions, roads would be constructed using crushed rock as subgrade and base course.			X
Culverts required for drainage through access roads would be properly spaced and sized to reduce bank erosion, sheet flooding, and impediments to fish passage (if any).			X
All culvert installations would be coordinated with appropriate federal, state, and local agencies.			X
Cross drains, water bars, rolling dips, ditch armoring, and drain inlets and outlets would be designed and constructed to reduce erosion and sheet flooding.			X
Existing culverts and stream crossings that pose a risk to riparian, wetland, or aquatic habitat would be improved to accommodate at least a 100-year flood and associated bedload and debris.			X
Road construction would be restricted to the minimum needed and nonessential existing roads and temporary construction access roads would be ripped, restored, and reseeded.			X
Non-essential existing roads and temporary construction access roads would be ripped to break compaction, and restored and stabilized with native vegetation seeding and drainage measures.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Hazardous Materials			
Extensive engineering and operational analyses would be completed for systems using hazardous chemicals. Risk management plans would be developed for those systems.	X		
AIR			
Emissions Control			
The project has been designed using Best Available Control Technologies (BACT) for the control of criteria pollutants and air toxics. BACT technologies proposed include dry low-NOx combustors, selective catalytic reduction (SCR) for additional NOx control, and oxidation catalysis for CO and VOC control.	X		
The plant would incorporate ultra-low drift elimination devices in the cooling towers, which would maintain drift at a level of 0.0002% of the amount of circulating water flow.	X		
Combustion technology on the combustion gas turbines would limit particulate emissions to 12 lb/hr.	X		
A continuous emissions monitoring (CEM) system would provide real-time information to the facility operators to ensure that the facility operates within the permitted limits.	X		
PM10 offsets are proposed in the form of emission reduction credits through the retirement of agricultural lands at the project site and in Walla Walla and Benton Counties.	X		
Natural gas is proposed to fuel gas combustion turbines, HRSG duct burners and the auxiliary boiler, thereby eliminating the higher emissions that would be associated with fuel oil combustion.	X		
Windblown Dust Control			
Windblown dust would be controlled through regular use of water or application of other appropriate dust suppressants.	X	X	X
Crushed rock aprons would be used at all construction entrances to reduce migration of construction dirt to adjacent public streets.	X	X	X
Rough-surface asphalt would be used to coat the temporary construction access road and power plant access roads early in the construction process.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Topsoil storage piles would be covered with tarps or emulsions.	X	X	
Vacuum sweeping and/or water flushing of paved road surface would be used to remove buildup of loose material on public streets affected by construction activities.	X	X	X
All trucks hauling soil, sand, and other loose materials would be covered, or all trucks required to maintain at least 2 feet of freeboard.	X	X	X
Traffic speeds on unpaved roads would be limited to 25 mph.	X	X	X
Erosion control measures would be implemented to prevent silt runoff to roadways.	X	X	X
Vegetation in disturbed areas would be replanted or reseeded as quickly as possible.	X	X	X
Temporary roads constructed in cropland would be removed and affected soils would be restored as necessary.			X
WATER			
Water Use			
Water rights would be partially retired through the purchase of existing land and water rights that would not be consumed during power plant operations. This would result in a net increase to instream flows in the Columbia River of 573.66 acre-feet per year. This is equivalent to 12.0% of the Wallula Power Project's maximum expected annual water usage.	X		
The cooling tower water chemistry is designed to accommodate 20 cycles of water circulation, thereby reducing the volume of cooling tower blowdown and plant makeup water requirements.	X		
The mechanical draft cooling tower design includes high efficiency drift eliminators that would reduce drift water losses to 0.0002% of circulating water flow, thus reducing the power plant makeup water requirements.	X		
Wastewater			
Design of a zero liquid discharge system, including the use of a brine concentrator and evaporation ponds, would eliminate the potential for water contamination from wastewater discharges.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
The evaporation ponds would be lined with a 2-foot-thick clay liner, on top of which would be a high-density polyethylene (HDPE) liner, which, in turn would be covered with a clay liner. A leakage detection system consisting of a network of collection pipes and sumps would be installed under the evaporation ponds to detect and collect any leakage that might occur through the pond liners. This leakage system would be monitored by plant personnel to ensure the integrity of the pond liners.	X		
The only wastewater that would be discharged to the ground would be domestic sanitary wastewater. It would be discharged to a septic system and drainfield designed and operated in accordance with local regulations and industry standards.	X		
Shallow groundwater quality would be monitored routinely in monitoring wells installed for this project.	X		
Erosion Control/Stormwater			
A stormwater pollution prevention plan (SWPPP) would be developed to prescribe technology-based measures for construction stormwater management.	X		
Stormwater control measures would be designed in accordance with the Washington Department of Ecology's guidance document, Stormwater Management Manual for Western Washington. These measures would be implemented as appropriate to reduce the potential for runoff during project construction.	X		
Stormwater control measures would be designed in accordance with Ecology's guidance document, Stormwater Management Manual for Western Washington (Ecology 2001). These measures would be implemented as appropriate to reduce the potential for runoff during project construction. These stormwater control measures could include the following. ▪ Temporary and permanent structural devices would be used to divert, store, or limit runoff from disturbed areas. This could include but not be limited to the installation of silt fences, sediment traps (catch basins), straw-bale dikes, and culvert inlet/outlet protection (rock or riprap), as appropriate. ▪ Properly spaced cross drains, water bars, or other appropriate measures would be used on access roads to intercept surface runoff and divert it before erosive runoff volumes and concentrations occur. ▪ Existing vegetation would be preserved where practical, especially near drainage areas. Where appropriate, disturbed areas would be temporarily seeded or mulched to reduce erosion and runoff during construction. ▪ Soil stabilization might include temporary or permanent seeding, mulching, geotextiles, or aggregate surfacing. ▪ Stabilization measures would begin as soon as practical where construction activities have temporarily or permanently ceased.	X		
The stormwater runoff from within the bermed area surrounding the power plant would be directed to oil/water separators and then to a lined detention pond for reuse within the facility. Stormwater from plant site areas outside the bermed power plant facility would be directed to an unlined pond for evaporation and infiltration.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
The stormwater management procedure and operational system would reduce the potential for contamination of stormwater in the project site area during construction and operation.	X		
The erosion control procedure and operational system would reduce the potential for turbidity in runoff in the project site area.	X		
Gates would be installed on roads to restrict access to authorized personnel only.			X
Erosion and sedimentation associated with transmission line construction would be minimized. Existing roads would be used where possible, minimizing the need for new road construction. Where feasible, Bonneville would avoid constructing structures on potentially unstable slopes.			X
Existing roads would be used for access wherever feasible, reducing the need for new road construction.			X
Where feasible, structure construction on potentially unstable slopes would be avoided.			X
Streams and Wetlands Protection			
Existing vegetation would be preserved where practical, especially next to intermittent and perennial creeks and streams.			X
To the extent practicable, construction in wetland areas along transmission line would be avoided.			X
Construction in wetland areas would be avoided to the extent practicable.			X
Intermittent stream crossings would be designed to avoid adverse impacts to stream hydraulics and deterioration of streambed or bank characteristics.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Hazardous Materials			
BMPs such as good housekeeping measures, inspections, containment, and spill prevention practices would be used to limit contact between potential pollutants and stormwater or groundwater. ▪ Storage areas for hazardous materials would be provided with secondary containment to ensure that spills in these areas do not reach surface waters. ▪ All construction vehicles would be monitored for oil and fuel leaks and would receive regular maintenance. ▪ Refueling or mixing hazardous materials would be avoided where accidental spills could enter surface or groundwater. ▪ Soil contaminated during construction would be removed and disposed at an approved disposal site. ▪ Sanitary wastes would be collected and portable units would be maintained on a regular basis. Wastes would be collected by a licensed contractor and disposed off-site in accordance with applicable regulations. ▪ Hazardous wastes generated during construction would be disposed of according to local or state regulations, or the manufacturer's recommendation. ▪ Fertilizers would be applied as recommended by the manufacturer and stored in a covered area or in watertight containers. ▪ All construction waste material would be collected and disposed at an approved disposal site.	X		
Impervious containment equivalent to 110% of tank volume would be constructed around and beneath all tanks containing hazardous substances.	X		
The sump vault beneath the ammonia storage area would contain 110% of the volume of a tanker truck used for delivery of aqueous ammonia for the NOx control system.	X		
A spill prevention and contingency plan would be prepared prior to the start of construction, and implemented to minimize the potential for hazardous materials to enter surface or groundwater.	X	X	X
Construction crews would avoid refueling and/or mixing hazardous materials where accidental spills could enter surface or groundwater.			X
A spill prevention and contingency plan would be prepared prior to the start of construction to minimize the potential for spills of hazardous materials to migrate to streams, other water bodies, or groundwater. BMPs would be developed and implemented to prevent fuel spills and herbicide runoff from reaching streams.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
WETLANDS AND VEGETATION			
Wetlands Protection			
There would be no direct clearing, grading, or filling of wetland areas located along the western edge of the project site and the Jaussaud property. Wetland E on the adjacent property to the north would not be directly affected by construction activities. A 100-foot buffer would be observed around these wetlands, to exclude construction equipment access.	X		X
Wetland F on the Jaussaud property would be protected by a 100-foot buffer. The proposed temporary access road to the project site would be located to avoid both the wetland and its buffer.	X		X
Mitigation for the loss of wildlife habitat value provided by these wetlands would be provided by enhancement of riparian habitats along the Walla Walla River via the applicant's participation with the Washington Department of Ecology in the purchase and placement into trust of water rights. Under the purchase agreement, approximately 145 acres of land would be planted with native trees.	X		
Structures and new roads would be located to avoid wetlands and buffers. If wetland filling is required for road or culvert construction, wetlands would be delineated and flagged and appropriate permits would be obtained prior to construction.			X
Before final design and prior to construction of the transmission line, site-specific wetland delineations and vegetation surveys would be conducted at proposed structure locations and along all proposed access roads. Areas that contain sensitive, threatened, or endangered vegetation species would be avoided through adjustments to structure and road locations.			X
Vegetation Management/Restoration/Protection Measures			
An erosion control plan and revegetation and landscaping plan would be developed for the project site and all other areas to be affected by construction, and submitted to EFSEC at least 90 days prior to construction. The plan would provide detailed specifications for erosion control methods, revegetation preparation, and seeding and planting species mixes, and describe long-term vegetation maintenance objectives.	X	X	
An environmental awareness plan would be prepared and submitted for EFSEC review and approval at least 90 days prior to construction. The plan would summarize the resources to be protected, the reasons for protection, the temporary and permanent protection measures to be employed, and performance standards for the protection measures.	X	X	

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
A qualified environmental monitor familiar with all plans noted above would inspect the work site prior to and during construction to ensure that avoidance areas are properly marked and observed.	X	X	X
The plans would be provided to all construction workers and operational personnel, and the environmental monitor and construction manager would hold briefing sessions to familiarize personnel with the plans.	X	X	X
Native plant species would be used, when possible, in revegetation and landscaping activities. Noninvasive species of nonnative plants may be used in situations where no native species is well suited for the project site or objective.	X	X	
When working within or adjacent to any drainage ditch, watercourse, ravine, etc., the contractor would have an emergency spill containment kit to contain and remove spilled fuels, hydraulic fluids, etc. Likewise, equipment refueling, or storage of these materials or any other toxic or deleterious materials would not occur within 100 feet of surface water. The washing of construction equipment, use of herbicides or disposal of general or other waste materials would not occur within or adjacent to within 100 feet of any drainage ditch, watercourse, ravine, etc. Storage and disposal of any hazardous or nonhazardous materials would adhere to applicable laws and regulations.	X	X	X
Avoidance areas would be established for all sensitive plant and wildlife occurrences in or near the construction impact zone. Metal or other strong stakes connected by rope or other visible fencing would identify the avoidance areas with flagging to increase visibility, as appropriate. Avoidance areas would be marked prior to construction in an area and would be maintained during construction. Markers would be removed when construction in the area is completed and all construction equipment has been removed.	X	X	X
Shrub-steppe habitat that is temporarily lost as a result of construction would be revegetated with native (and appropriate nonnative) shrub-steppe and/or dryland grass species at the conclusion of construction. Shrub-steppe habitat that is permanently lost as a result of construction and operation of the power plant would be replaced by an equivalent area of shrub-steppe habitat through revegetation and/or enhancement of habitat at another site in the area.	X	X	
An initial project site restoration plan as outlined would be developed to address the restoration of the project site at the end of the life of the project.	X		
Noxious Weeds			
Aggressive vegetation management programs would be implemented to limit colonization by nonnative species and eradicate noxious weeds where feasible. Weed control techniques would be implemented in accordance with Walla Walla and Umatilla County Weed Board policies and the Bonneville Transmission System Vegetation Management Program ROD (July 2000; DOE/EIS-0285).	X	X	X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
All straw (bales or loose) or hydro-mulch would be certified as weed free.	X	X	X
Noxious weed infestations would be avoided in wetlands by washing all construction vehicles and conducting a weed inventory 1 year after construction to verify that weeds have not been introduced.			X
Preconstruction noxious weed surveys would be conducted during the summer of 2002 to determine the current extent of noxious weeds along the proposed right-of-way for the transmission line. The survey would document the presence and extent of species listed as a concern within Walla Walla County in Washington and Umatilla County in Oregon. A postconstruction survey 1 year after the completion of construction would occur to determine any change in the presence of noxious weeds. This information would be used to determine a course of action to prevent the spread of noxious weeds along the right-of-way.			X
AGRICULTURE AND LIVESTOCK			
Irrigated crop circles disturbed during makeup water supply pipeline and natural gas pipeline construction would be returned to service after pipeline construction. Pipelines would be buried 5 feet below grade to allow tilling to occur without damage to the pipelines.		X	
The top 12 inches of topsoil in the areas of agricultural and native habitat would be removed and preserved for final grade reuse.		X	
Temporary access roads through nonirrigated farmlands would be obliterated through successive farming cycles.			X
Access roads and structure footings would be located to avoid irrigated farmlands.			X
Disturbed areas would be monitored for noxious weeds and managed to prevent introduction and spread.		X	X
Lost agricultural cropland would be compensated by an easement agreement with the landowner.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
WILDLIFE			
Measures described previously to mitigate impacts to vegetation and wetlands also apply to wildlife mitigation.	X	X	X
Construction Timing and Construction Avoidance Areas			
Prior to construction, site-specific wildlife surveys would be conducted at proposed structure locations and along all access roads. Sensitive, threatened, or endangered wildlife species and critical habitat would be avoided through adjustments to structure locations and access road alignments.			X
Prior to construction, it would be verified that no new bald eagle nests have been constructed in the project area. If any were found, construction would not occur within 2,600 feet of the nest during the nesting period (January 1 through August 15).			X
Active western burrowing owl nest sites would be protected from disturbance closer than 75 meters (250 feet) during the breeding season (March 15 to August 15).	X		
Prolonged activities (0.5 hour to several days), such as human access, should be avoided, and noisy, prolonged activities would not occur within 1 kilometer (0.62 mile) of occupied ferruginous hawk nests during the breeding season (March 1 to August 15). Construction or other developments near occupied nests would be scheduled around this time period, if necessary.	X		
To the extent possible, riparian corridors would be spanned, leaving riparian vegetation in the right-of-way for use as wildlife travel corridors. New road building within or adjacent to wetlands would be avoided, structure footings would not be placed within or adjacent to wetlands, and soil disturbance would be minimized within or adjacent to wetlands and stream banks.			X
If possible, the transmission line in the McNary Wildlife Area would be constructed between April 1 and September 30. If construction within the McNary Wildlife Refuge does occur during the winter, Bonneville would limit access within the refuge to short periods, and muffle sound from heavy equipment. Some activities such as surveying, staking, and site preparation could potentially be performed in winter.			X
Road construction through the Wanaket Wildlife Area would be coordinated with the Area Manager.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Revegetation/Habitat Restoration			
Shrub-steppe habitat that is temporarily lost as a result of construction would be revegetated with native (and appropriate nonnative) shrub-steppe and/or dryland grass species at the conclusion of construction. Shrub-steppe habitat that is permanently lost as a result of construction and operation of the power plant would be replaced by an equivalent area of shrub-steppe habitat through revegetation and/or enhancement of habitat at other sites in the area.	X	X	X
Mitigation for the loss of wildlife habitat value provided by wetlands would be provided by enhancement of riparian habitats along the Walla Walla River via the applicant's participation with the Washington Department of Ecology in the purchase and placement into trust of water rights. Under the purchase agreement, approximately 145 acres of land would be planted with native trees.	X		
Project site-specific surveys would be conducted prior to construction to determine the presence of several special-status bird species such as merlins during migration, western burrowing owls, sage thrashers, Oregon vesper sparrows, sage sparrows, bald eagles, ferruginous hawks, loggerhead shrikes, and Swainson's hawks, and two special-status mammal species—black-tailed jackrabbits and Ord's kangaroo rats. If these species are present, specific mitigation plans would be developed and offsite mitigation would be implemented for loss of habitat required by these species.	X		
Prevention of Bird Strikes			
Strobe lighting meeting the recommendations of the U.S. Fish and Wildlife Service Division of Migratory Bird Management and Federal Aviation Administration (FAA) Circulars 70/460-1G and 70/460-1H would be installed on the four HRSG exhaust stacks. White strobe lights would be used with the minimum number of lights, intensity, and number of flashes per minute (longest duration between flashes) allowable by the FAA. Security lighting would be down shielded.	X		
Flat configuration towers would be used in the McNary Wildlife Area to suspend conductors at the same height as the existing transmission line to lessen risk of bird strikes.			X
At the Walla Walla River crossing, bird diverters or yellow spherical markers would be placed on ground wire (the uppermost wire spanning the river crossing) to avert bird collisions.			X

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FISHERIES			
Wetlands and Riparian Areas			
Riparian habitats along the Walla Walla River would be enhanced via purchase and transfer of water rights and the planting of 145 acres with native trees.	X	X	
Transmission line structures and access roads would be sited to avoid riparian areas, sediment and erosion control methods would be used during construction, and clearing of riparian vegetation would be minimized.			X
To the extent possible, new road building within or adjacent to wetlands would be avoided.			X
Water Quality Protection			
When working within or adjacent to any drainage ditch, watercourse, ravine, etc., the construction contractor would have an emergency spill containment kit to contain and remove any accidentally spilled fuels, hydraulic fluids, etc.	X	X	
Equipment refueling and storage of fuels and hydraulic fluids or any other toxic or deleterious materials would not occur within 100 feet of surface water.	X	X	
The washing of construction equipment, use of herbicides or disposal of other waste materials would not occur within 100 feet of any drainage ditch, watercourse, ravine, etc.	X	X	
Several measures would be taken to avoid or minimize potential impacts to fish habitat from access road construction and road use: implementing construction BMPs to protect water quality; minimizing construction activities on steep or unstable slopes; eliminating the construction and use of fords during construction; using temporary or permanent culverts where required; and moving or avoiding existing access roads or crossings with known erosion problems. In addition, existing roads would be improved to remedy potential erosion problems prior to construction.			X
Access roads would be designed to minimize the potential for erosion. Construction of steep, straight road sections, which could result in channelization and concentration of runoff, would be avoided.			X
Standards and guidelines established in the record of decision (ROD) for vegetation management would be followed.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
A spill prevention and contingency plan would be developed prior to the start of construction, and implemented to minimize the potential for spills of hazardous materials and potential impacts on streams and other water bodies. The plan would include provisions for storage of hazardous materials and refueling of construction equipment outside of riparian zones, a spill containment and recovery plan, and notification and activation protocols.			X
Measures for Specific Areas			
The Walla Walla River (Location 1) is by far the best aquatic habitat for fish and is occupied by threatened, endangered, and sensitive species. Most impact would be avoided through keeping construction activities out of the water and timing activities to avoid important fish life history stages. Impacts are expected to be low because disturbance of the riparian areas would be minimized through BMPs and mitigation measures.			X
North of existing towers 56-3 and 56-4 on the Lower Monumental–McNary Transmission line (between Locations 7 and 8), a new access road would cross a small, unnamed intermittent drainage. The crossing requires a 60-inch culvert and approximately 50 tons of fill material. Potential impacts would be minimized by constructing during the dry season and implementing BMPs and mitigation measures.			X
ENERGY AND NATURAL RESOURCES			
The number of transmission structure locations would be optimized to reduce the amount of steel required for construction.			X
Construction vehicles would be regularly serviced to optimize fuel consumption.	X	X	X
Crushed rock for roads would be used only where existing soil conditions require that the road base materials and/or filter fabric be constructed for stability.	X	X	X
NOISE			
Construction Equipment/Activities			
Measures to reduce potential construction noise impacts during nonexempt days or hours would be implemented, such as the use of temporary noise-reducing panels between the project construction site and the affected area, and the implementation of a noise education and compliance process.	X	X	X
A steam blow exhaust silencer would be used to reduce the noise level approximately 20 dBA during steam cleaning of the piping systems.	X		

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Pile driving necessary for the project construction would be limited to daytime hours, and the affected community would be notified in advance of any pile driving or blasting activities.	X	X	X
All noise producing equipment and vehicles using internal combustion engines would be equipped with mufflers and air inlet silencers, where appropriate; be in good operating condition; and meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc welders and air compressors) would be equipped with shrouds and noise control features that are readily available for that type of equipment.	X	X	X
The use of noise-producing signals, including horns, whistles, alarms, and bells, would be used for safety warning purposes only. No project-related public address loudspeaker, two-way radio, or music system would be audible at any adjacent noise sensitive receptor.	X	X	X
The on-site construction supervisor would have the responsibility and authority to receive and resolve noise complaints.	X	X	X
Facility Operation			
Generating station noise mitigation measures would be implemented in the detailed design phase of the project to achieve nighttime and daytime noise levels at all residential receivers in compliance with the Washington State noise limits. These measures would include, but would not be limited to, purchase of a steam turbine-generator and combustion gas turbine-generator standard noise mitigation package, enclosures around the gas reducing stations, enclosures around the steam turbine-generators, and additional noise mitigation measures such as sound walls and/or enclosures.	X		
Transmission line corona noise generation would be designed to meet or exceed Bonneville standards.			X
LAND AND SHORELINE USE			
Bonneville would reduce the visibility and contrast of disturbed areas through strategic vegetative clearing and placement and alignment of access roads, particularly in significant recreational areas such as the Walla Walla River crossing.			X
Line and structure locations would be adjusted to avoid agricultural uses or subdivision lots where possible.			X
If required, relocation services and benefits would be provided pursuant to Public Law 91-646 and other related regulations to affected owner occupants, tenants, and businesses. Eligible parties would be provided with information concerning the relocation process and given assistance in filing claims for relocation benefits.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Landowners would be compensated at fair market value for any farmland removed from production.			X
Farmers would be compensated for crop damage, and given assistance to control weeds and restore compacted soils.			X
The placement of new structures and equipment and the logistics and timing of construction at the Smiths Harbor Switchyard would be coordinated with landowners.			X
No permanent road construction would take place in cultivated or fallow fields if this is desired by the landowners.			X
Roadbeds would be repaired, and disturbed ground would be repaired and reseeded as necessary.			X
Fences, gates, cattle guards, and rock would be added to access roads to keep them in good repair and contain cattle.			X
Easement agreements would cover short-term damage and any long-term impacts to affected agricultural lands resulting from the water or natural gas pipeline.		X	
VISUAL RESOURCES/ LIGHT AND GLARE			
Light and Glare			
The project would be developed and operated consistent with industrial light and glare provisions of the Walla Walla County Zoning Code Regulations – Title 17.	X		
Where economically feasible, all new equipment and fencing would be constructed of materials that restrict glare.	X		
The power plant structures and equipment would be finished with flat light brown (sandalwood) paint	X		
To the extent possible, power plant lighting would be shielded from public view, directing light downwards. Where practical, outdoor lighting would be restricted to low-intensity lamps, such as sodium or mercury vapor lamps except for the HRSG stacks' lighting.	X		
Nonreflective conductors and nonluminous insulators would be used to reduce impacts to recreational use.			X
Roads			
To the extent possible, access roads would not be placed in highly sensitive areas.	X	X	X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Temporary construction roads would be returned to their original contours following construction to reestablish preproject surface flow patterns.			X
Existing road systems would be used to access new transmission line structure locations as much as possible.			X
Degraded road surfaces would be repaired and unused roads decommissioned.	X	X	X
The visibility and contrast of disturbed areas would be reduced through strategic vegetative clearing and placement and alignment of access roads, particularly in significant recreational areas.			X
Vegetation/Landscaping			
Visual impacts would be reduced with vegetative screening on the perimeter of the project site. When fully mature, the tree screening the site would largely shield all near-field views, and shield all but the upper third of the four HRSG stacks from the far-field views from the north, west, and south.	X		
Cut and fill slopes would be revegetated on access roads and near structure locations.	X	X	X
Existing vegetation would be preserved along highways where possible to screen the transmission line and structures.			X
Noxious weed infestations would be reduced in wetlands by washing all construction vehicles and conducting a weed inventory 1 year after construction to verify that weeds have not been introduced.	X		X
Other Measures			
Where possible, new transmission line towers would be sited near existing towers using a similar structure type to lessen visual clutter.			X
Water would be applied to disturbed areas to reduce dust.	X	X	X
Construction on steep slopes, steep road grades, and geologically unstable areas would be minimized.		X	X
POPULATION, HOUSING, AND ECONOMICS			
Private landowners would be compensated for the market value of the easement area and any severed property, together with market value for any timber off the right-of-way and future rights to remove danger trees.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
A stipulation agreement with Walla Walla County would commit the applicant to prepay taxes for mitigation of impacts to Walla Walla County to cover costs incurred due to the Wallula Power Project prior to receipt of property tax revenues.	X		
PUBLIC SERVICES AND UTILITIES			
Fire Protection			
The existing on-site 1,200 gpm well would be outfitted with a fire protection connection for use during the construction period.	X		
A comprehensive communication plan would be developed that coordinates Fire District 5 responses to emergencies at the project site with the applicant and the power plant operator. The communication would become part of the fire suppression and prevention plan during construction and the fire prevention plan during operation.	X		
At least 90 days prior to construction, meetings would occur between the applicant, the power plant construction contractor, and Fire District 5 to coordinate all final construction response plans and communications.	X		
At least 90 days prior to operation, meetings would occur between the applicant, the power plant operations and maintenance contractor, and Fire District 5 to coordinate all final operational response plans and communications.	X		
Fire District 5 staff recommended that the applicant have an on-site response capability for confined-space entry situations and other emergencies. The applicant has committed to providing this on-site capability.	X		
Site Security			
Project site security during construction and operation would include chain-link fences, adequate lighting, access control, security services, and communication planning.	X		
Bonneville intends to provide on-site security for the transmission line during construction.			X
Waste Disposal			
Construction sanitary waste would be managed through a contract with a local portable toilet vendor.	X	X	
Operational sanitary waste would be treated in an on-site septic system.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Solid waste would be handled through a service contract with a local waste management firm.	X	X	
The power plant is expected to qualify as a small quantity generator of hazardous wastes. These wastes would be accumulated in a satellite accumulation area designed for appropriate security, waste containment, segregation, and safety. The hazardous wastes would be disposed through a service contractor in accordance with applicable federal, state, and local regulations.	X		
Emergency Management			
Prior to construction the applicant would meet with the Hanford site safety officer to discuss comprehensive communication plans and evacuation procedures in the event of a Hanford emergency. Similar meetings would be held with the safety officer at the Umatilla Chemical Depot.	X		
Other Measures			
Modern hardware and construction practices would be used to minimize potential effects of television interference and radio interference.			X
Bonneville has an active program to identify, investigate, and mitigate legitimate radio and television interference complaints.			X
CULTURAL RESOURCES			
Construction staging areas, access roads and structure locations were not defined at the time of the field survey and will require a field reconnaissance survey prior to construction.			X
Prior to construction, BPA would conduct site-specific cultural resource surveys at the proposed structure locations and along all access roads. Any identified cultural or historical sites would be avoided through relocation of structures or realignments of proposed access roads.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
To eliminate impacts to cultural resources, known archaeological sites would be avoided during the project's construction. Below is a summary of specific avoidance measures for each site. ▪ **Newport No. 1.** Measures to avoid impact to the site identified during the Lithic Analysts survey of the northernmost portion of the Area of Potential Effects (APE) would include staking and flagging the site boundary prior to construction activities. Should construction activities occur within or adjacent to the site's boundaries an archaeological monitor would be present to observe for cultural materials. ▪ **Wallula Site No. 1.** Impact to prehistoric Wallula Site No. 1 would be avoided by locating the proposed transmission line on the west side of the existing 500 kV transmission line. Wallula Site No. 1 is located approximately 300 feet east of the existing transmission line and therefore would be completely avoided by limiting construction and operating activities to the west of the existing 500 kV line. ▪ **Wallula Site No. 2.** Construction activities would not directly impact Wallula Site No. 2 due to its location on the side of a relatively steep hill where helicopters would be employed rather than ground-based vehicles to assist in the installation of structures. To ensure avoidance to prehistoric Wallula Site No. 2, the site boundary (as determined by visual components) would be staked and flagged prior to the start of construction activities. ▪ **Wallula Site No. 3.** Measures to avoid impact to Wallula Site No. 3, which is located 200 feet north of the existing transmission line, would include staking and flagging the site boundary (as determined by visual examination) prior to nearby construction activities. An archaeological monitor would also be present for construction activities.			X
A lithic scatter located near the proposed makeup water supply pipeline would be avoided. The archaeological site boundary would be staked before construction and monitored during construction. If it becomes necessary to ascertain more information about the archaeological site, it would be tested by subsurface excavation in a phase II survey.		X	
Bonneville has consulted with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and other Native American Tribes within the region, including the Yakama Indian Nation, the Nez Perce Tribe, the Confederated Tribes of the Colville Indian Reservation, the Warm Springs Tribe, and the Wanapum Band of Indians. Bonneville has requested information from the tribes on the history and cultural significance of the proposed project areas. A ground survey for cultural and historical artifacts has been conducted in conjunction with the CTUIR along the transmission line corridor, as well as an inventory of known cultural and historical sites in the vicinity.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
All known or identified cultural or historical sites along the proposed corridor would be avoided when setting structure foundations, staging areas, or access road locations. Should any previously unknown artifacts be identified during construction, all activities in the immediate area would stop until the resource can be evaluated by an archaeologist meeting the Secretary of the Interior's Qualifications Standards for Archaeology (48 Federal Register 44738-39). Representatives of the CTUIR would be contacted and the area would be surveyed and avoided if possible during further site construction. If human remains/burials were encountered, construction would cease immediately in the area of the burial and the area would be secured and placed off limits for anyone but authorized personnel. The Indian Tribal monitor would notify the Cultural Resource Protection Program (CRPP) of the CTUIR immediately and the CTUIR Policies and Procedures Manual for the Handling of Ancestral Human Remains and Funerary Objects would be implemented.			X
A tribal cultural resource monitor from the CTUIR would be present during construction-related ground disturbance in agreed upon areas.	X	X	X
Depending on the type and significance of any new cultural resource discovery, procedures may include testing the site with shovel test probes (STPs) to determine the site boundaries and any possible subsurface components. If results of the shovel test probes determine the presence of an extensive subsurface component, the structure location may be moved. Alternatively, a full data recovery program for the site could be developed and implemented in consultation with the CTUIR and Washington and/or Oregon State Historic Preservation Office archaeologists.			X
The applicant intends to work with CTUIR in developing a list of candidate cultural resource mitigation projects in the Walla Walla basin to identify a mitigation project relative to the Wallula Power Project. Once finalized and approved by both the applicant and CTUIR, a stipulation agreement would be executed and submitted to EFSEC.	X	X	X
TRAFFIC AND TRANSPORTATION			
Construction			
A temporary construction access road that would originate at the project site and intersect with U.S. Highway 12 is proposed to reduce impacts on the existing Dodd Road traffic, to reduce impacts to the Dodd Road-U.S. Highway 12 interchange, and to provide safer ingress and egress to the project site.	X		
During construction, manual traffic control would be used to direct truck movements and protect existing traffic from construction traffic if needed.	X		X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
The construction contract would include a transportation management plan to enhance safety for construction workers, pedestrians and motorists. This would help avoid congestion during construction. Part of this plan would be a requirement to avoid public road access during the morning and mid-afternoon peak hours as much as possible. Blockage or closures of roads would be avoided or minimized where possible, and coordinated with periods of low traffic volumes (off-peak hours).	X		X
Property owners would be notified in advance when their access may be blocked or restricted during construction.			X
Damages to road surfaces would be repaired as soon as possible following construction.	X		X
Construction activities would be coordinated with property owners to diminish interference with use of property.			X
Operation and Maintenance			
Access roads and spur roads would be used to perform routine, periodic maintenance and emergency repairs on transmission line structures, switchyards, conductors, and other equipment.			X
Access roads would be maintained (including road grading, clearing of vegetation, and maintaining ditches and culverts). Minimal clearing of vegetation is anticipated for maintenance of this right-of-way.			X
Maintenance crews would be responsible for preventing the spread of noxious weeds within the right-of-way using methods compatible with practices identified in the Transmission System Vegetation Management ROD (July 2000) (DOE/EIS-0285).			X
Other Measures			
If the Washington State Department of Transportation (WSDOT) proceeds in the future with converting at-grade county road intersections to interchanges with ramps and overcrossings, all at-grade U.S. Highway 12 access points would be closed and all local circulation would take place on a county road network connecting the interchanges and providing access to local properties. In this eventuality, the applicant has agreed to grant an easement to WSDOT for a county-maintained road across the project site, as a segment in a longer north-south aligned arterial located east of U.S. Highway 12. The easement is being built as a portion of the county north-south arterial to county collector or arterial standards. Further, the applicant is planning a new road extension between the project site and Dodd Road to create a new road designed to county collector or arterial standards.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
The applicant has agreed to provide up to $35,000 in funds to partially sponsor a long-range area transportation plan for the Attalia Industrial Urban Growth Area along with the WSDOT, Port of Walla Walla, and the Walla Walla County Public Works Department (lead agency). When the funding agreement and work scope are fully documented, they would be submitted to EFSEC.	X		
Gates would be installed on access roads to reduce unauthorized use.	X	X	X
If required by the FAA, yellow marker balls would be placed on the ground wire at the Walla Walla River crossing to assist in aviation safety.			X
HEALTH AND SAFETY			
Protection from Fire and Explosion			
A dedicated water storage supply would be provided for fire protection purposes. This would consist of a minimum of 240,000 gallons in the service water storage tank, sized in accordance with National Fire Protection Association (NFPA) 850 to provide 2 hours of protection from the on-site, worst case, single fire.	X		
An electric jockey pump and electric motor driven main fire pump would be installed to increase the water pressure in the power plant fire mains to the level required to serve all water fire fighting systems.	X		
A diesel, engine-driven fire pump would be installed to pressurize the fire loop if the power supply to the main fire pump fails.	X		
A dedicated underground firewater loop piping system with fire hydrants would be provided with the fixed suppression systems supplied from the firewater loop.	X		
Fixed fire-suppression systems would be installed at determined fire risk areas such as transformers, turbine lubrication oil equipment, steam turbine cooling towers, and the aqueous ammonia storage tanks.	X		
Sprinkler systems would be installed in the auxiliary boiler, warehouse, water treating and administration buildings as required by NFPA.	X		
Hand-held fire extinguishers of the appropriate size and rating would be located throughout the facility in accordance with NFPA 850.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
The combustion gas turbine-generator units would be equipped with ▪ Gas detectors that alarm when combustible gas in the combustion gas turbine unit enclosures reaches approximately 25% of the lower explosive limit. ▪ Automatic shutdown controllers for the natural gas supply trip valves if the combustion gas turbine concentration reaches 60% of the lower explosive limit. ▪ Vent fans in the combustion gas turbine enclosures to ventilate any collected gas. ▪ Thermal fire detectors and smoke detectors located throughout the combustion gas turbine enclosures. Actuating one sensor would provide a high temperature alarm on the combustion gas turbine control panel. Actuating a second sensor would trip the combustion gas turbine, turn off ventilation, close the ventilation openings, and automatically release gaseous carbon dioxide to quench the fire.	X		
The steam turbine-generator units would be supplied with ▪ A bearing pre-action water spray system, which provides fire spray water to the steam turbine-generator bearings in case of a fire. ▪ Fire detectors and an automatic water-deluge water spray system for the steam turbine-generator lube oil areas.	X		
Each major transformer would be supplied with ▪ A deluge spray system in the case of a fire. ▪ Concrete foundations with crushed rock and curbs to contain a transformer mineral oil fire. ▪ Block walls installed as fire breaks between transformers.	X		
The auxiliary boiler building would house the emergency diesel fire pump, the emergency diesel generator, and the gas-fired auxiliary boiler. This equipment would be supplied with fire detectors and automatically operated deluge water spray systems.	X		
The cooling towers would be supplied with a dry pipe water spray system in case of a fire.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Ammonia Storage			
The ammonia storage tanks would be equipped with ▪ Fire detectors, ammonia leakage detectors and an automatically initiated water deluge system to cool the ammonia storage tanks. ▪ A surrounding enclosed walled area to contain the entire storage capacity. ▪ A 3-foot opening under the ammonia tanker truck unloading area emptying into a wet sump sized to hold the entire contents of a tanker truck in case of a leak.	X		
Aqueous ammonia (24.5%) would be stored and used, rather than anhydrous ammonia. This would be a significant mitigating factor in reducing the potential off-site impact from an accidental release.	X		
Ammonia tanks would be built to the proper codes, as required by the seismic zone 2B.	X		
Engineered controls, such as containment dikes and sumps, would be used to minimize the emissions of potentially spilled ammonia. A containment dike would be installed around the storage tanks to contain a release from a tank. The loading area would be designed to contain and drain spilled ammonia through a 3-foot opening into a wet sump that can hold the entire truckload volume.	X		
Oil, Diesel, and Other Materials			
The distillate fuel oil, gasoline, and diesel oil would be stored in diked aboveground carbon steel storage tanks.	X		
The steam turbine generators would contain hydraulic oil and generator seal oil in piping and tanks.	X		
All tanks would be designed to meet the applicable standards of the American Society of Mechanical Engineers and the American National Standards Institute.	X		
The 5,600-gallon aboveground diesel storage tanks would require a spill prevention control and containment plan under the requirements of the Clean Water Act (40 CFR 112), which would regulate discharge of oil into navigable water or adjoining shorelines.	X		
The safety controls and handling processes committed to in the project description would minimize the potential for off-site impacts from chlorine and/or hydrogen gas release.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Gas Pipeline Safety			
On-site natural gas pipelines would be inspected and maintained in accordance with the facility operation and maintenance plan to meet or exceed all regulatory requirements.	X	X	
Natural gas line appurtenances would be protected on the project site through containment within buildings or within immediate fenced in areas. Bollards would be erected, as required, to ensure that on-site vehicles cannot reach critical areas. Access to critical areas would be limited to authorized personnel. The natural gas pipeline would be buried in all other uncontrolled areas.	X	X	
The natural gas pipeline would be inspected as required by GTN who is the designer, constructor, operator, and owner of the natural gas pipeline. Upon evidence of a natural gas leak, the personnel conducting the inspection would use a combustible gas indicator to determine ambient gas concentrations in the soil and air, and immediately notify their supervisor of the leak. Once informed, the power plant emergency action plan would then be implemented. The inspectors would be qualified in accordance with U.S. Department of Transportation requirements specified in 49 CFR Part 192. The following are typical events to be investigated and reported: ▪ Any evidence of a leak (dead or dying vegetation, odor). ▪ Flooding or unusual erosion of roads, banks, easements, or right-of-way. ▪ Subsidence or cracking of land and paved surfaces. ▪ Construction, land leveling, or excavation work by others on or adjacent to the natural gas pipeline. ▪ Subdivision planning, surveying, or construction activity in the vicinity of the natural gas pipeline. ▪ Missing or mutilated natural gas pipeline markers, or inadequately marked natural gas pipelines. ▪ Evidence of gunshot damage or corrosion on exposed piping and components. ▪ Evidence of vandalism. ▪ Inoperative or damaged cathodic protection facilities.		X	
Maintenance or repair work on either the existing Chevron Products pipeline or the proposed natural gas pipeline would be coordinated and jointly inspected by both Chevron Products and GTN to ensure no damage to either pipeline would occur.		X	

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Measures to lessen natural gas pipeline construction risks would include: ▪ A qualified and experienced pipeline construction contractor would perform construction. ▪ Prior to construction, the existing natural gas pipeline would be located and staked. ▪ Construction method and safety procedures would be established to avoid striking or damaging the Chevron Products pipeline. ▪ Heavy equipment would not normally be operating over the Chevron Products pipeline during construction of the new natural gas pipeline. ▪ Heavy equipment or trucks would cross the existing natural gas pipeline at existing road crossings or at right angles to the natural gas pipeline with the ground bridged with mats or additional soil cover. ▪ The trench for the new natural gas pipeline would be covered or cordoned off after work hours to prevent livestock or anything else from falling into the trench.		X	
Transmission Line Safety			
Lines would be designed and constructed in accordance with the National Electrical Safety Code (NESC) to minimize shock hazard. NESC specifies the minimum allowable distances between the transmission lines and the ground or other objects.			X
The proposed project would meet the electric field standard of 9 kilovolts per meter (kV/m) maximum on the right-of-way and 5 kV/m at the edge of the right-of-way.			X
The fire control regulations established by the landowners would be followed, including carrying the requisite fire suppression equipment in mobile vehicles.			X
Safe clearance between the tops of trees and the proposed transmission lines would be established and maintained to prevent fires and other hazards.			X
The storage of flammable materials on the right-of-way would be prohibited. Operation and maintenance of the proposed transmission line would follow prescribed policies that minimize the potential for fire.			X
Ground wires and counterpoise wires would be installed on the new transmission system, providing lightning strike protection.			X

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Disposal of Hazardous Materials			
Strict procedures for disposal of common construction materials (e.g., concrete, paint, and wood preservatives) and petroleum products (e.g., fuels, lubricants, and hydraulic fluids) or any other hazardous materials used during construction would be followed.	X	X	X
Operating Procedures			
Qualified personnel, using written procedures, would operate the power plant. The procedures would provide clear instructions for safely conducting activities involved in the startup, normal operations, temporary operations, normal shutdowns, emergency shutdowns, and subsequent startups. The procedures for emergency shutdowns would include the conditions under which emergency shutdowns are required and the assignment of shutdown responsibilities to qualified operators to ensure that shutdowns are performed in a safe and timely manner. The procedures also would cover the consequences of operational deviations and the steps required to correct or avoid the deviations.	X		
Before they are allowed to operate the facility, operating employees would be presented with a facility plan including the health and safety program as outlined in the Application for Site Certification and would receive training regarding the operating procedures and other requirements of safe power plant operations. In addition, operating employees would receive periodic refresher training, which would include testing of their understanding of the procedures. Individual training and testing records would be maintained.	X		
Protective equipment would be provided for personnel use during chemical unloading. In addition, personnel working with chemicals would be trained in proper handling techniques and in emergency response procedures for chemical spills or accidental releases.	X		

Mitigation Measure	Power Plant	Pipelines	Bonneville T-Line
Health and Safety Plans/Programs			
Potential hazards associated with the compressed gases and flammable liquids used for welding, painting, and other activities would be reduced by compliance with a construction health and safety program. The program would include the following elements: ▪ an injury and illness prevention plan, ▪ a written safety program, ▪ a personnel protective devices program, ▪ on-site fire suppression and prevention plans, ▪ off-site fire suppression support, and ▪ an emergency plan. The general construction contractor would administer the program to ensure compliance with laws, ordinances, regulations, and standards pertaining to worker safety.	X		
Several programs would be developed to address hazardous materials storage, emergency response procedures, employee training, hazard recognition, fire safety, first aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communications, personnel protective equipment, and release reporting requirements. The applicant has also committed to developing and implementing emergency plans addressing project evacuation, fire or explosion, natural gas release on-site, natural gas release off-site, ammonia release on-site, other chemical releases on-site, diesel oil/gasoline release on-site, floods, weather abnormalities, emergency freeze protection, earthquake, volcanic eruption, personnel injury, facility blackout, and external facility threats (e.g., bomb threats).	X		
Spillage prevention and control measures for diesel fuel oil, gasoline, lubricating oil, boiler and water treatment chemicals, and resins would be documented in a spill prevention, control, and countermeasures plan developed prior to commencement of operations. This will show storage, detention, and response procedures for all chemicals on site.	X		
Prior to construction, the applicant would meet with the Hanford site safety officer to discuss comprehensive communication plans and evacuation procedures in the event of a Hanford emergency. Similar meetings would be held with the safety officer at the Umatilla Chemical Depot.	X		